Domestic Water-user Input in Forest Development Planning in the Nelson Forest Region

Special Report

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Introduction

Most residents in the Slocan Valley rely on streams for domestic water. Water quality, quantity and timing of flows are important factors that affect their water supply. In areas such as the Slocan Valley, where 60 to 70 percent of harvestable land occurs in watersheds that supply water for domestic purposes, water-users are frequently concerned about the impact of forest practices on water. Consequently, there is a high level of public interest in forestry planning.

Since 1995, the Forest Practices Board has received a number of complaints that relate to protection of water from effects of forest practices. Because most of those complaints came from the Nelson Forest Region, the chair of the Board decided to issue this special report to assess whether water-users in that region have adequate opportunity to provide input into watershed assessments and other operational planning processes related to forest practices.

Background

In August 1996, the Slocan Valley Watershed Alliance (the Alliance), an advocacy group for water-users, filed a complaint with the Forest Practices Board about the district manager's approvals of operational plans in the Arrow Forest District. The Alliance asserted that the district manager should not have approved operational plans for at least 10 watersheds that supply domestic water because there had been no participation by water licensees in watershed assessments. A watershed assessment is an analytical procedure that helps forest managers anticipate water-related problems that may exist in a watershed. It identifies possible hydrological implications of proposed forestry-related development in a watershed.

The Alliance maintained that water licensees should have had the opportunity to participate in watershed assessments, regardless of whether or not the watersheds were designated as "community watersheds" under the *Forest Practices Code of British Columbia Act* (the Act). The Board investigated the complaint and acknowledged that there was some basis for such an expectation. However, there was no legal requirement for water-user participation.[1] Nevertheless, the Board concluded that the issue of protection of domestic water supplies remains important, so the Board decided to examine the opportunities available under the Act and related regulations (the Code) for domestic water-users to have input into operational planning. The Board's report deals specifically with the Nelson Forest Region, where the complaint arose.

Licences to take water for domestic purposes are issued by the Ministry of Sustainable Resource Management under the *Water Act*. The Code provides some general protection for water quality, and has additional provisions to protect watersheds that supply water for domestic purposes if they are designated as "community watersheds" under the Code. In 1996, there were 48 such community watersheds in the Arrow Forest District, of which 11 were in the Slocan Valley. However, there were another 1,300 watersheds in the district that had licensees under the *Water Act* but were not community watersheds. Such "domestic watersheds" are not specifically mentioned in the Code. Nevertheless, water in domestic watersheds receives some protection under the Code because water is a "forest resource." The Code requires adequate

management and conservation of forest resources, including water, when planning and carrying out forest practices.

Designation as a community watershed is not based solely on watershed size or on the number of water licensees. A domestic watershed can be as large as any community watershed and supply dozens of *Water Act* licensees but still not be a community watershed. Officials may be reluctant to designate a domestic watershed as a community watershed if water licences are held by individuals rather than an organized, incorporated water-users' community. However, many domestic water-users do not want to form an incorporated body because, by doing so, they may incur responsibilities for base flow monitoring, improved waterworks and, possibly, for chlorination or other water treatments. The Alliance summarized these concerns as "government regulation running contrary to the pioneering spirit of the Slocan Valley."

If a watershed is designated as a community watershed, there is an increased level of protection for water quality under the Code. Watershed assessments must be carried out in community watersheds. Although not a legal requirement, government normally involves water-user representatives in watershed advisory committees as part of those assessments. The committees are technical groups, not public participation forums. They typically include 5 to 10 members who represent resource interests in the watershed. Their purpose is to focus on the hydrological implications of forest development in watersheds and to make recommendations for the forest development plan based on these implications.

Discussion

The issue of protection of domestic water supplies is an important one. The history of controversy involving forest roads and harvesting in the Slocan Valley partly reflects that importance. In addition, the auditor general of BC[2] and the Sierra Legal Defence Fund[3] both released reports recently about protection of drinking water sources. The auditor general's report in particular confirmed that activities such as forestry could have a significant impact on water sources. It concluded that the province needs an effective, integrated planning process that protects drinking water in the face of other activities. However, although the Forest Practices Code does provide some protection of drinking water, the auditor general found that government is not set up to deliver an integrated planning process. No single agency is the "voice of water" within government. The report concluded that the province is still not adequately protecting drinking-water sources from human-related impacts. The new *Drinking Water Protection Act*[4] also may not comprehensively deal with assessing the risks of forest land-use activities on water. That act is very general. Until specific regulations are passed, the Board cannot determine if the *Drinking Water Protection Act* will adequately protect water from the effects of forest practices.

Given the combination of a history of local concerns and the auditor general's report, the Board decided to use the circumstances of a complaint as background to examine the broader issue of the adequacy of opportunities for water-users in the region to have input into watershed assessments and other operational planning processes.

1. Options for water-users to participate in planning of upstream forest practices

Currently, all water-users have at least two avenues to make known their concerns about proposed forest practices. They can use the Code's public review and comment process for forest development plans and they can engage in informal discussions with forest licensees and government agencies.

Some water-users, particularly those within community watersheds, have a third option—having a representative involved in a watershed assessment. Watershed assessments are the analytical means to identify water-related impacts from forestry-related development, including changes to peak flow, landslides, accelerated surface erosion, riparian condition and stream channel stability. Those impacts affect water intakes and the quantity, quality and timing of flow of water used for domestic purposes. Assessment of water-related impacts is important to water-users in both domestic and community watersheds, but assessments typically are required only in community watersheds. The Board examined how domestic water-users in watersheds that are sensitive to disturbance could provide input through watershed assessments. There are two ways to do so: acquire community watershed designation, or ask licensees and government agencies to ensure that watershed assessments are also carried out in at least some domestic watersheds.

2. Legal requirements for watershed assessments

Section 17(2)(b) of the Act requires forest licensees to "assess watersheds that meet the prescribed requirements to determine the impact of proposed timber harvesting and related forest practices." Section 14[5] of the *Operational Planning Regulation* sets out those requirements. Subsection (1) requires watershed assessments to be conducted in:

a) a community watershed;

b) a watershed that has significant downstream...domestic water values and significant watershed sensitivity as determined by the district manager and a designated environment official; and

c) a watershed for which the district manager determines an assessment is necessary.

Nowhere does the Code require that water-users participate or even be consulted in a watershed assessment. Section 14(2) of the *Operational Planning Regulation* requires that assessments be done in accordance with Code guidebooks or with any other comparable procedure approved by the district manager. Significantly, the guidebook[6] stops short of actually requiring water-user representation in a watershed advisory committee. It states that a watershed advisory committee is not a regulatory requirement for a watershed assessment, but that it is "usually included in the process under Ministry of Forests or Ministry of Environment, Lands and Parks (now the Ministry of Water, Land and Air Protection) policy." The effect has been to make watershed advisory committees a standard feature of watershed assessments.

In summary, watershed assessments are required in all community watersheds. Beyond that, the district manager, with or without a designated official from the Ministry of Sustainable Resource Management, has the discretion to require watershed assessments elsewhere. The legislation refers to a guidebook that includes a recommendation to have water-user representation in advisory committees for watershed assessments, but such participation is not actually required unless the district manager so specifies.

3. Opportunities for water-user input through watershed assessments

a) Input through acquiring community watershed designation

Given that watershed assessments are mandatory only in community watersheds, one option for domestic water-users to enhance their opportunity to be represented on watershed assessments is to acquire community watershed designation. Watersheds are designated as community watersheds in one of two ways:

1. When the Code came into force in June 1995, watersheds that had an intake on a stream, had a watershed area less than 500 square kilometres, and were either licensed for a waterworks purpose (defined in the *Water Act* as "the supply of water by a municipality, improvement district, development district or person for the use of the residents of an area") or for a domestic purpose by a "water-users community" incorporated under the *Water Act* became community watersheds. Under Section 41(8) of the Act, about 475 watersheds were rolled in as community watersheds.

2. Under section 41(10) of the Act, a community watershed can be designated by a regional manager of the Ministry of Forests and a regional land and water manager of the Ministry of Sustainable Resource Management.

An application for community watershed status is usually made by a water licensee and submitted to the regional water manager. The application is then referred to other agencies and publicly advertised. The criteria used by government managers for community watershed designation were described in 1996 in the *Community Watershed Guidebook*. The guidebook recommends evaluating the community's need for water, alternative water sources, extent of private land in the watershed (a high ratio of publicly-owned land is preferred), watershed size (smaller watersheds preferred) and natural suitability of the watershed as a water source (stable terrain preferred). Watersheds with a number of residences concentrated along a short reach of stream, from which most are drawing water, could create the required "community" for designation even without an incorporated water-users' community.

In the Nelson region, a policy[7] was developed to further refine those criteria. Applicants need not meet provincial health standards for safe drinking water, but must at least reach an agreement with the Ministry of Health Services to do so in the future. Applicants must also provide a map of the drainage above the furthest downstream water intake. Small watersheds (less than 500 square kilometres) are preferred for designation, especially if the water-users are organized into legally incorporated water-user groups (including water-user communities).

Where there is no formally organized group, the policy is to consider designation for any stream with 15 or more water licensees, as long as three conditions are met:

1. There must be at least an informal organization with a designated representative.
2. Most of the water-users must support the application for community watershed status.
3. The water source must be suitable for human consumption.

The water licensees must agree to allow water quality analysis and to monitor water quality at the water intakes after the watershed is designated.

That policy came into effect in late 1998 and has a term of five years. However, in the 30 months since, the regional water manager has received only one application for community watershed designation. Application forms and background information were sent to about two dozen persons who expressed interest, but none of those actually applied. The reason for the lack of applications is not known. It may reflect water-users' acceptance of forest practices in some domestic watersheds. It could be due to a lack of awareness on the part of water-users of the extra protections that follow community watershed designation. It could indicate a reluctance of many domestic water-users to organize and allow one user to act as a representative for all. It could also represent a concern voiced by the Alliance that the Ministry of Health Services may require an agreement to treat or chlorinate the water before it will sign off on a community watershed application. Whatever the reason, domestic water-users are not seeking community watershed designation as a means to require watershed assessments. They are not using the Code's mechanism of community watershed designation to create an opportunity to provide advice to mitigate water impacts from forest practices.

b) Input through assessments in domestic watersheds

There are a number of ways that domestic water-users could be represented in watershed assessments, even if the watershed is not a community watershed:

- ?? They could ask the district manager to require assessments with water-user representation.
- ?? They could ask licensees to include water-user representatives in any watershed assessments that the licensees are undertaking voluntarily.
- ?? They could also ask to be represented in assessments recommended under the local land use plan.

Section 14 of the *Operational Planning Regulation* allows district managers, either alone or with designated environment officials, to require assessments in watersheds that are not community watersheds. Those powers have not been used in the Slocan Valley. Instead, forest licensees have tended to carry out watershed assessments wherever water-users have raised concerns, removing the need for formal requirement by government. For example, the Board's complaint investigation looked into the use of watershed assessments on 14 domestic watersheds[5] from 1995 to 1998. Eleven had assessments done by the licensee, although there was no requirement to do so. The number of water-users registered in each watershed ranged from 2 to over 100. In eight cases, water licensees were offered the opportunity to participate, but they declined to do

so. The Alliance decided in 1996 not to participate in discussion of watershed-specific hydrological studies. Instead, it proposed to several cabinet ministers that there be a negotiated settlement for the entire Slocan Valley. Until the ministers responded, the Alliance was opposed to further participation in watershed-specific planning. The Alliance and the groups it represented took the position:

> ...that logging within the Slocan Valley must be discussed on a valley-wide basis, and to ensure that all watersheds are treated equally, individual groups have agreed not to enter into direct negotiations with the company or government. This approach is vital to retain the ecological integrity of the whole valley.[9]

It may also be significant that the watershed assessment process does not give water licensees any decision-making input. Water licensees on watershed advisory committees only provide advice and input to hydrologists and foresters.

Whatever the reason, the Alliance's approach resulted in almost no water licensee participation in domestic watershed assessments at the time. Even though they chose not to participate, domestic water licensees in the Slocan Valley usually had the opportunity to do so.

The third potential way for water-users to have input in watershed assessments is to ask for representation whenever assessments are recommended under the Kootenay-Boundary Land Use Plan (KBLUP). That plan was released in March 1995, and parts of it were declared to be a higher level plan for Code purposes in January 2001. The plan included a section on "safeguarding watersheds" that recognized the importance of safeguarding water supplies for communities and residents. However, there is no reference to water licensee participation in watershed assessment procedures. There was an implementation strategy for the KBLUP approved in the summer of 1997. For community watersheds, the implementation strategy simply confirmed management according to the Code's *Community Watershed Guidebook*. However, for domestic watersheds, the implementation strategy proposes a level of management greater than the minimum standard prescribed by the Forest Practices Code and less than that required for community watersheds.[10]

The implementation strategy recommends that forest licensees complete basic assessments of hazards related to forest activities and then address water-users' concerns and modify forest development plans to address identified hazards. In domestic watersheds of 5 to 500 square kilometres, a forest activity proponent must submit a "domestic watershed report card." The report card is a scaled-down version of the Code's watershed assessment procedure. It rates hazards related to peak flow, surface erosion, riparian buffers and landslides.

The implementation strategy does not, however, adopt input by water-users' representatives as described in the *Community Watershed Guidebook*. Instead, it makes domestic watershed water-users responsible for reviewing watershed assessments during the public review and comment process for forest development plans. The implementation strategy makes the forest licensee responsible for notifying water-users of the opportunity to be involved in review of forest development plans.

Water-users are to be encouraged to attend forest development plan presentations and review assessments and then notify agencies if problems are identified. Referring to domestic watersheds, the implementation strategy states:

> When the forest development plan is advertised for public review, the forest company…will make a reasonable effort to notify the affected water-user that…the forest development plan proposes harvesting or roads in the (blank) domestic watershed within the next five years.
>
> This process will ensure that water licensees are notified about the proposed activity and are aware of their opportunity to comment on the forest development plan. Public input will be facilitated by the inclusion of the watershed assessment, which will give water-users an indication of existing and proposed impacts to the watershed.[11]

In summary, the KBLUP and its implementation strategy propose water-user participation in watershed assessments only in community watersheds. For domestic watersheds, the strategy proposes something less. Water licensees in domestic watersheds are to have input through the public comment and review process for forest development plans. That means they could also review completed domestic watershed report cards and any Code-required watershed assessments. However, it does not mean that water-user representatives are to be involved in round table consultation in assessments of domestic watersheds.

c) Input in the absence of watershed assessments

Where watershed assessments are not done because they are not required under the Code or the KBLUP and are not carried out by a licensee, there are other mechanisms that allow water-user input into forest development planning. One is through informal discussions with a forest licensee or government. Such discussions can result in direct notification of local water-users about forest development plans and, potentially, referral of the plans themselves to local water-users for review and comment. Such discussions can also result in joint field reviews at both the forest development plan and more detailed silviculture prescription stages. Informal discussions could lead to water-users participation in broader landscape unit planning. The other mechanism, reinforced by the KBLUP domestic watershed process, is through the public review and comment process that is part of the preparation and approval of forest development plans.

These input opportunities are not equivalent to those available through watershed assessments, however. The public review process for forest development plans is a one-time, non-interactive process, as opposed to the ongoing discussions that occur in a watershed assessment. In addition, forest development plan reviews are intended for the general public to review and comment on broad development issues and many forest resources. It can be awkward for a water-user to take up time at such a review with a detailed examination of the potential effects on only one resource (water) from development in only one watershed.

In its special report on the forest development planning process in BC,[12] the Board recently confirmed that there are problems with the public review and comment process for forest development plans. Many members of the public find forest development plans to be technical and difficult to understand. Others feel intimidated by reviewing forest development plans at

forest licensee offices. Both concerns apply to water licensees and may discourage some from providing input through that process.

Forest development planning processes do not provide water-users with an equivalent opportunity to define and resolve watershed management issues as would be provided by having representatives involved in a watershed assessment.

Conclusions

1. The majority of residents in the Slocan Valley rely on streams and other surface water for domestic water. Consequently, protection of surface water is a vital concern to residents of the valley. It is also an important objective of the Code.

2. Watershed assessments are an important potential source of information to ensure adequate management and conservation of surface water. Water-users, as those most directly affected by negative impacts on surface water, have an interest in having representatives directly involved in planning forest practices that may affect water quality and quantity. Although watershed assessments are not conducted in all watersheds and are not public participation forums, water-user representatives should routinely be involved in advisory committees in watershed assessments whenever they occur. The representatives can provide history of water use, water quality and flooding, as well as relevant local knowledge about the watershed.[13]

3. Participation by water-user representatives in watershed assessments is strongly recommended in the *Coastal Watershed Assessment Procedure Guidebook* (CWAP) *Interior Watershed Assessment Procedure Guidebook* (IWAP), and it occurs in most community watersheds. Designation of significant domestic watersheds as community watersheds is the most effective mechanism to enhance the opportunity for water-users to be represented on watershed assessments. However, the designation of additional community watersheds, as contemplated by the Code, has not taken place in the Nelson region. The Board did not investigate the reasons for that.

4. Beyond community watershed designation, the Board finds that the Code does not take adequate account of the importance of water-user involvement in forest planning in domestic watersheds. This is not to say that the Code should become "the voice of water." Protection of drinking water is a complex matter and the Code deals with only one aspect: the protection of water quality from the effects of forest practices. Nevertheless, members of the public need to be involved where forest development planning has a direct effect on the public, such as potentially affecting domestic water supply.

   The Board has previously endorsed extra efforts, beyond the minimum Code requirements, to communicate and to resolve controversial issues.[14] That has happened in the Slocan Valley, where at least one forest licensee has undertaken watershed assessments in domestic watersheds when the Code does not require it.

   However, such extra efforts cannot be assumed. The Board considers that government policy, as expressed in the KBLUP implementation strategy, sets an appropriate

compromise assessment process between the Code's regimes for community watersheds and elsewhere. Water-users who wish to apply for community watershed designation can do so. If they prefer to not apply, or if designation is refused, water-users in domestic watersheds can still use the public review and comment process for forest development plans to review domestic watershed report cards. The public review and comment process will allow domestic water-users to examine how forest development plans propose to deal with identified hazards to water quality, quantity and timing of flows.

Recommendations

1. Water-users in domestic watersheds should consider applying for community watershed designation and thereby enhance their opportunity for representation in watershed assessments and the maximum protection offered by the Code.

2. Government should consider the adequacy of the incentives for user-groups to form community watersheds.

3. The Board recommends the following changes to legislation:

   First, a procedural obstacle to requiring watershed assessments should be removed. Currently, section 14(1) of the *Operational Planning Regulation* requires that, if regulatory officials determine that a watershed is of one of three types that require assessments, a new assessment must be carried out every three years. While this may be suitable for designated community watersheds, it may be excessive for non-community watersheds. Therefore, the Board recommends that the requirement to carry out a watershed assessment within the previous three years be deleted from section 14(1) and inserted only into clause 14(1)(a) so as not to apply to clauses (b) and (c).

   The Board also recommends that section 14(1) of the *Operational Planning Regulation* be revised to strengthen provisions to require watershed assessments in all watersheds that have significant water-user interests. Currently, the subsection reads as follows:

   > 14. (1) ...before making a forest development plan available for review..., a person must have carried out a watershed assessment...for...:
   >
   > (a) a community watershed;
   >
   > (b) a watershed that has significant downstream fisheries values or licenced domestic water-users and significant watershed sensitivity as determined by the district manager and a designated environment official;
   >
   > (c) a watershed for which the district manager determines an assessment is necessary.

   The district manager has discretion in clause (c) to require assessments in domestic watersheds. It seems, however, that the wording of clause (b), not (c), is most suited to ensuring that assessments are carried out on sensitive non-community watersheds that have

significant licenced domestic water-users. There is no obvious reason why the district manager alone has broad sole discretion to require assessments under clause (c), but that the designated environmental officer must have the agreement of the district manager before such discretion can be exercised to protect licensed water-users in important domestic watersheds. The Board recommends that section 14 be revised to remove the need for joint determinations for watersheds that have significant downstream fisheries values or licensed domestic water-users and significant watershed sensitivity. Specifically, the Board recommends that clause (b) of section 14(1) be revised to delete the words "the district manager and."

Endnotes

1 *Slocan Valley Watershed Assessments, Complaint Investigation 950083, FPB/IRC/46*, Closing Letter, May 25, 2001.

2 Auditor General, 1999, *Protecting Drinking-Water Sources. 1998/1999: Report 5*, Office of the Auditor General of BC, Victoria.

3 Sierra Legal Defence Fund, 2000, *Muddied Waters – The Case for Protecting Water Sources in B.C.*. Sierra Legal Defence Fund, Vancouver.

4 S.B.C. 2001, c. 22, passed April 11, 2001.

5 At the time of the complaint, almost identical provisions were found in section 32.

6 *Coastal Watershed Assessment Procedure Guidebook (CWAP), Interior Watershed Assessment Procedure Guidebook (IWAP) - 1999*

7 *Memorandum of Understanding on Designation of Community Watersheds in Nelson Forest Region*, MoF and MELP, September 1998.

8 Perry Ridge, Bonanza, Airy, Shannon, Wilson, Van Tuyl, Hasty, Vevey, Hills, Ringrose, Lemon, Elliot/Anderson/Christian/Trozzo, Winlaw and Pedro Creeks.

9 Letter, November 14, 1996, from the Slocan Valley Watershed Alliance to the Brandon Improvement District.

10 *Kootenay Boundary Land Use Plan Implementation Strategy*, June 1997, page 31.

11 *Kootenay Boundary Land Use Plan Implementation Strategy*, June 1997, page 44.

12 *A Review of the Forest Development Planning Process in British Columbia*, FPB/SR/04, December 2000, p. 41.

13 This is the role recommended in the Code's *Coastal Watershed Assessment Procedure Guidebook* (CWAP) *Interior Watershed Assessment Procedure Guidebook* (IWAP) that replaced the *IWAP Guidebook* in 1999.

14 See the Board's 2001 complaint investigation report *Water Quality in the East Blackpool Watersheds*.